

VERNER, LIIPFERT, BERNHARD, MCPHERSON AND HAND

CHARTERED

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EX PARTE OR LATE FILED

Thomas J. Keller  
(202) 371-6060

November 16, 1994

**HAND-DELIVERED**

**RECEIVED**

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W.- Room 222  
Washington, D.C. 20554

DOCKET FILE COPY ORIGINAL

NOV 16 1994

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

Re: Permissible Ex Parte Presentations  
in PR Docket No. 92-235

Dear Mr. Caton:

Pursuant to Section 1.1206 of the Commission's Rules, this is to inform the Commission that the Association of American Railroads; Forest Industries Telecommunications; International Taxicab and Livery Association; Manufacturers Radio Frequency Advisory Committee, Inc.; Utilities Telecommunications Council; American Automobile Association; International Telecommunications Association; American Petroleum Institute; National Association of Business and Educational Radio; and the Association of Public-Safety Communications Officials-International, Inc., met with members of the Commission's Private Radio Bureau Staff on November 15, 1994, to discuss the above-referenced proceeding.

During the course of the meeting, discussion was held concerning the enclosed documents which were prepared by the FCC staff and distributed to all attendees at the meeting.

Respectfully submitted,



Thomas J. Keller

cc: Representatives of the above-named organizations  
Kathryn Hosford (PRB)  
Herb Zeiler (PRB)  
Ron Netro (PRB)  
Ira Keltz (PRB)  
Joe Levin (PRB)

No. of Copies rec'd 0  
List A B C D E

November 15, 1994

IMPLEMENTATION PLAN BASED ON 10/13/94 PLAN

**\*\*26 years\*\***

Date 1 [1997]: equipment sold must be <12.5 or compatible  
new systems must operate at 12.5 or equivalent  
Date 2 [2007]: urban systems must operate at 12.5 or equivalent  
Date 3 [2011]: equipment TA must be <6.25 or compatible  
new systems must operate at 6.25 or equivalent  
Date 4 [2021]: all systems must operate at 6.25 or equivalent

**\*\*New system -- a new repeater site that extends coverage of an existing system would NOT be considered a new system.\*\***

**\*\*VHF channelized at 7.5 kHz, except PS at 6.25 kHz\*\***

**\*\*UHF channelized at 6.25 kHz\*\***

**\*\*New channels -- available immediately for 12.5 or equivalent\*\***

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**\*\*One Step 20->6.25 kHz or Two Steps 20->12.5->6.25 kHz\*\***

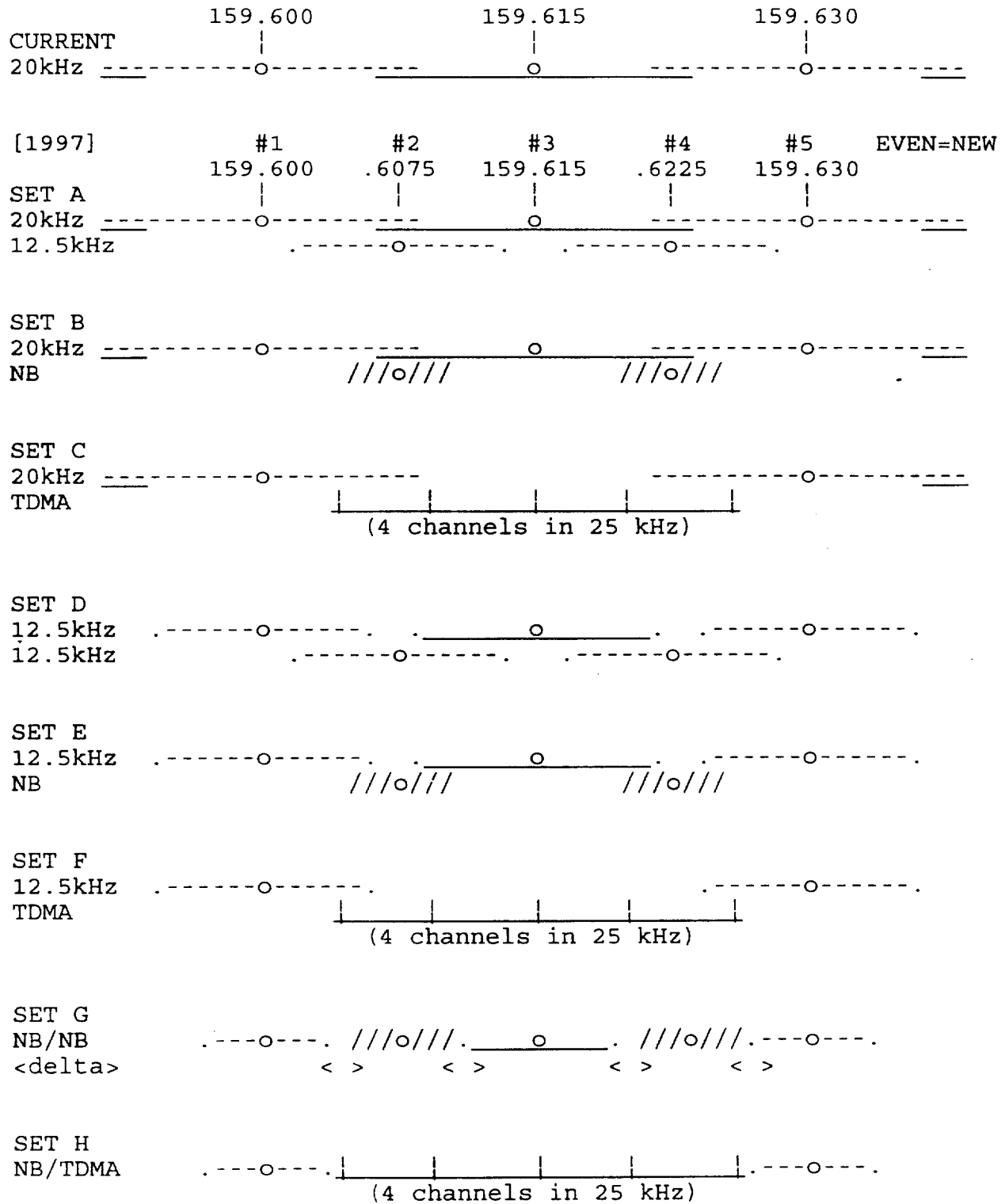
PHASE I: 20-->12.5 or 6.25 kHz

- o all new stations must be 12.5 or equivalent
- o urban systems until date 2 [1995-2007, 12 years]
- o rural systems until date 4 [1995-2021, 26 years]

PHASE II: 12.5-->6.25 kHz

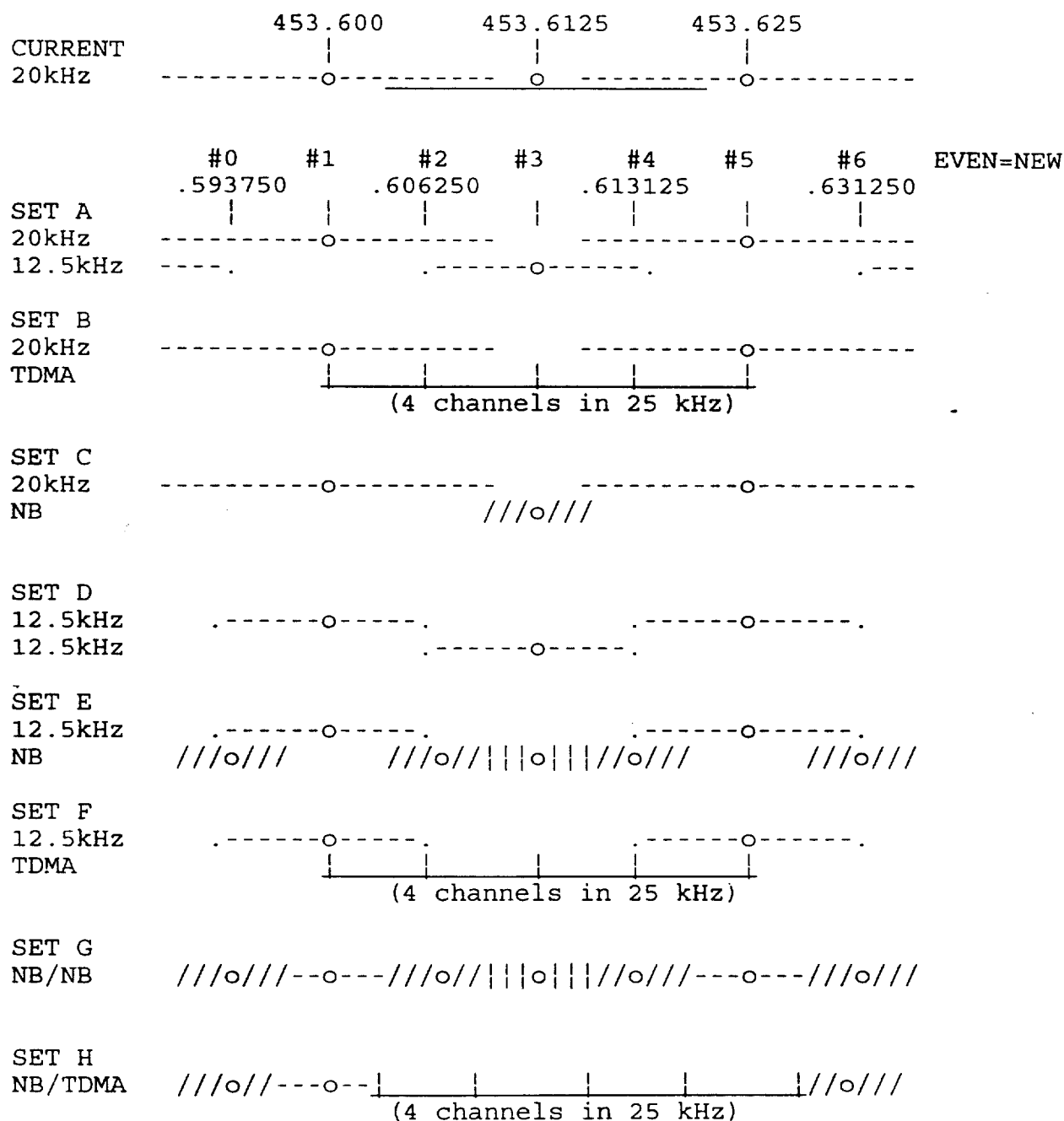
- o all new stations must be 6.25 or equivalent
- o urban systems from date 2-4 [2007-2021, 14 years]
- o rural systems until date 4 [1995-2021, 26 years]

EXAMPLE: VHF (150-170 kHz) AT 7.5 kHz CHANNELIZATION



NOTE: After Date 2 [2007], 20 kHz not applicable for urban areas.

EXAMPLE: UHF (450-470) AT 6.25 kHz CHANNELIZATION



NOTE: After Date 2 [2007], 20 kHz not applicable for urban areas.

## UHF (470-512) AT 6.25 kHz CHANNELIZATION

Figure 1 illustrates the relationship between the sampling rate and the number of samples per period for a 1000 Hz sine wave. The diagram shows three rows of data, each representing a different sampling rate. The top row shows the sampling rate (PS) and the number of samples per period (488.6125, 488.6375). The bottom row shows the sampling rate (20kHz, 12.5kHz, 6.25kHz) and the number of samples per period (606250, 613125, 625, 631250, 64375).

\*\*\*\*\*

## VHF - PUBLIC SAFETY AT 6.25 kHz CHANNELIZATION

9 channels @ 15 kHz (135 kHz spectrum) --> 20 channels

```

1           2           3           4           5           6           7           8           9
o-----o-----o-----o-----o-----o-----o-----o-----o
o-----o-----o-----o-----o-----o-----o-----o-----o
o-n--n--o--n--o--n--o--n--n--o--n--o--n--o--n--o--n--o--n--o
1           freq shift upward (or closest)           20

```

November 6, 1994

Questions and Topics concerning Transition Plan

Adjacent channel separations

Digital and analog in same environment

Backward/Forward operation

Definition of new system (footnote \*\*\*)

Relocation of UHF Low Power channels

Failure of narrowband at VHF 90.271

Depletion of 20 kHz equipment by 1997

VHF 7.5 channel spacing 6.25 Bw?

Interference between 12.5 + 20

## **REFARMING**

**PURPOSE: TO RELIEVE FREQUENCY CONGESTION FOR THE "MAIN-HAUL"  
PRIVATE LAND MOBILE COMMUNICATIONS BANDS**

### **NPRM GOALS:**

- o **TO INCREASE CHANNEL CAPACITY IN BANDS BELOW 512 MHz**
- o **TO PROMOTE MORE EFFICIENT USE OF THESE CHANNELS**
- o **TO SIMPLIFY OUR POLICIES GOVERNING THE USE OF THESE BANDS**
- o **TO ALLOW A REASONABLE TRANSITION PERIOD**

**BANDS USED BY DIVERSE GROUP OF BUSINESS AND GOVERNMENT ENTITIES  
(police and fire departments, highway authorities, trucking and land transportation,  
railroads, petroleum and utilities, large industries, and small businesses)**

**FUNDAMENTALLY, REFARMING SHOULD ADDRESS THE FUTURE REQUIREMENTS  
OF THE PRIVATE LAND MOBILE COMMUNITY WELL INTO THE 21st CENTURY**

**Kathryn Hosford, FCC  
November 15, 1994**

## **REFARMING    CONSIDERATIONS**

### **EXISTING TERRAIN:**

**25 MHz of Nationwide Spectrum (9 VHF, 16 UHF)  
6-12 MHz in 11 Urban Areas at UHF  
12 Million Transmitters Existing  
15 Billion Dollars in Investment**

### **COMPETING REQUIREMENTS:**

**Large Users - Small Users  
Sophisticated Systems - Low End Cheap Radios  
Voice - Paging - Facsimile  
Narrowband - Broadband (56kbs-1Mbs)**

### **TECHNOLOGY:**

**Trunking, Low Power Cell-type, Duplex operations  
FDMA, TDMA, ACSB, LM  
6.25/5 kHz Equipment  
APCO-25 Standard  
Dual Mode , Forward/Backward Compatible**

### **FEDERAL GOVERNMENT:**

**Requires 12.5 kHz starting 1995, all systems converted by 2005  
Equipment at 12.5 currently available (Motorola/Ericson GE)  
APCO-25 type equipment from 4-5 vendors (additional 5 soon)**



## **WHERE DO YOU WANT TO BE IN 15 [26] YEARS ?**

- o **PRIVATE LAND MOBILE RADIO:** focus on private
- o **FLEXIBILITY** - narrowband channel plan
- o **INCREASED SYSTEM PLANNING** - frequency coordinators